H. Agriculture

General—Ability of Oregon's Agricultural Programs to Meet CZARA Requirements

Comment: Some commenters noted that they did not believe Oregon had satisfied the CZARA requirements for Agriculture and the conditions related to the agriculture management measures that NOAA and EPA placed on Oregon's Coastal Nonpoint Program. They believed Oregon has failed to control polluted runoff from agriculture activities and that water quality and designated use impairments were still occurring due to agricultural activities. Various points were made about the ineffectiveness of existing enforcement and monitoring efforts as well as the inadequate management approaches and programs the state relies on to meet the CZARA requirements (see specific comments below for detailed examples). Other commenters felt strongly that the state had satisfied the CZARA agriculture management measures and the conditions placed on its program related to agriculture (see specific comments below for detailed examples). They noted that finding otherwise would be unreasonable and would not be in line with CZARA requirements. Some commenters also noted finding that the state has not submitted an approvable program for agriculture would punish of the agriculture community.

Source: 44-F, 49-G, 64-C, 65-F, 66-C, 68-C

Response:

<u>General –Effectiveness of the Agriculture Water Quality Management Area Program and Plans for</u> Meeting the CZARA Management Measures

Comment: Several commenters expressed concerns with the effectiveness of the state's Agriculture Water Quality Management Area (AWQMA) Program for addressing polluted runoff. They did not believe the program enabled Oregon to meet CZARA requirements. However, other commenters were supportive of the program and thought it did enable the state to meet its CZARA agriculture requirements.

Specifically, commenters that were concerned about the adequacy of the AWQMA Program, noted that current agricultural water quality management area rules are insufficient to meet water quality standards and TMDL load allocations. They also stated that there is inadequate enforcement of the rules and lack of an implementation plan to ensure that agricultural landowners' voluntary actions occur. Oregon Department of Agriculture (ODA) largely relies on voluntary actions by landowners to adhere to the AWQMA rules and meet water quality standards. For example, one commenter, who is an agriculture landowner and a member of an Agricultural Water Quality Management Area (AWQMA) local advisory committee, discussed how the committee was informed that the AWQMA plan would be complaint driven and compliance was voluntary. The commenter questioned the effectiveness of this approach when ODA only issued three fines over the last eleven years.

Other commenters that felt Oregon had satisfied its CZARA agriculture management measure requirements and conditions through the AWQMA Program, noted that the coastal AWQMA plans directly reference the 6217(g) agriculture management measures and that ODA has the authority to require management measures that meet CZARA requirements or impose additional measures if

necessary. They also believed the AWQMA plans and rules had sufficient goals and policies for improving water quality within coastal watersheds.

These commenters also described how ODA works with ranchers and farmers to modify, reduce and remove ineffective agriculture practices. Commenters noted that farmers have worked hard to meet or exceed water quality standards by working with the state to develop Agricultural Water Quality Management Plans, which set watershed goals and investment priority areas that enhance water quality. They added that this planning also requires ODA to implement site-specific and site-appropriate controls, which are "designed to address actual water quality issues with economically achievable measures", which aligns with CZARA's requirements for economically achievable management measures. Several farmers noted that they willingly participated in the AWQMA and voluntary programs because they had the understanding that the AWQMA Program and there voluntary efforts would meet all federal and state regulatory requirements for agriculture.

Commenters noted the success of the state's AWQMA Program and voluntary efforts over the years. For example, one commenter noted between 1998-2012, OWEB contributed nearly \$18 millions for coastal agriculture projects and over an additional \$5M was provided in-kind support from SWCDs and landowners. These efforts were able to restore over 950 linear stream miles and improved agricultural practices that impacted over 2,750 acres of farmland. In addition, landowners voluntarily enrolled thousands of acres of farmland in federal programs designed to improve water quality.

Various groups represented by one comment letter contended that the Agricultural Water Quality Management Plans and rules meet and exceed the requirements of CZARA. They pointed out that agricultural land use represents approximately five percent of land uses within the coastal zone and the primary agricultural land use of that five percent is pasture or hay agriculture resulting in lesser impacts to water quality. They argued that most agriculture landowners comply with existing water quality management rules and meet relevant CZARA requirements and there is an existing process in place to address noncompliance instances. They also contended that CZARA requires the State and its agencies to use its authority to enforce a water quality program that meet or exceed 16 U.S.C. 1455b requirements and that ODA has demonstrated it has used its authority to enforce AWQMP rules where necessary and appropriate in the state's July 2013 submission.

Other commenters also asserted that the ODA has the ability to enforce the AWQMA program and ensure compliance with water quality requirements. They refute claims by others that few ODA enforcement actions over the years demonstrate that ODA does not have the ability and/or will to enforce the AWQMA program and ensure water quality is protected. On the contrary, the commenter notes that when a problem is identified, ODA first works closely with the noncompliant landowner to make necessary land use changes voluntarily before turning to enforcement. Therefore, most issues are corrected before an enforcement action is needed. Commenters highlighted the existing review and monitoring processes ODA has enacted to track program "implementation and effectiveness".

Source: 57-CC, 57-EE, 64-C, 64-F, 65-B, 65-C, 65-D, 65-E, 65-F, 66-C, 66-F, 68-C, 68-F, 71-A, 71-B, 71-C, 71-G, 71-K, 71-N, 71-Q, 72-A, 73-A, 78-H, 78-I

Response I.1:

<u>General—Inadequacy of Oregon Water Resources Department's (OWRD) Water Use Basin Program for Meeting Irrigation Management Measure</u>

Comment: Another group commented that the Oregon Water Resources Department's (OWRD's) Water Use Basin Program is inadequate for meeting CZARA requirements for agriculture. They suggested that NOAA and EPA were incorrect when finding that OWRD's Water Use Basin Program supports the irrigation measure and reiterated that Oregon's Basin Programs do not ensure that water quality and habitat for sensitive and endangered species will not be impaired. They urged EPA and NOAA to look closely at the deficiencies of the Basin Programs before attributing any water quality or fish habitat protection value to them as a measure in support of Oregon's agricultural conditions. They added that Oregon's rules provide no assurance that water use will be adequately limited to maintain minimum flows and Basin Programs fail in practice to protect minimum perennial streamflows and instream rights held by OWRD for the protection of aquatic wildlife and water quality. They concluded that EPA should disapprove Oregon's agricultural measures and acknowledged the lack of protection offered by Oregon's Water Use Basin Programs for preservation of aquatic life and designated uses in the agencies' final determination.

Source: 65-B, 65-C, 65-D, 65-E, 65-F

Response I.2:

Agriculture-Buffers

Comment I.3: Various commenters noted the need for adequate buffers along both fish and non-fish bearing streams to protect water quality, including cold water temperatures needed for the recovery and health of native salmon. It was noted that Oregon lacks necessary management measures for riparian protection to help meet water quality standards and to protect coho salmon, amphibians, and drinking water. Another commenter noted too that Oregon has failed at controlling polluted runoff caused by erosion and sedimentation from agricultural lands and destruction of riparian areas by livestock. On the other hand, it was pointed out that farmers and ranchers have installed many miles of piping for livestock watering, and have planted and fenced many miles of stream banks.

One commenter spoke about her experience serving as an advisory member to the Mid-Coast Basin Agricultural Area Advisory Committee during its local area planning in 2009. The commenter explained that when specific buffer proposals were presented to the committee, "All of the specific proposals for riparian protection were rejected by the committee, despite their knowledge of specific water quality problems in the basin created or exacerbated by inadequate riparian vegetation, including stream temperature problems and bacterial contamination from livestock".

However, other commenters asserted that the AWQMA plans do require buffers. They noted that CZARA does not specifically require riparian buffers for agriculture. If NOAA and EPA do require a blanket riparian buffer for agriculture lands through the Coastal Nonpoint Program, it would be taking a "one-size-fits all" approach that goes against the inherent flexibility that CZARA provides the states.

Source: 15-H, 44-F, 49-G, 55-E, 71-R, 72-A, 81-A, 83-E, 83-F, 83-L

Response I.3:

Agriculture-Pesticides

Comment I.4: Commenters expressed their concerns with the amounts of pesticides being applied and lack of management measures in place to address pesticide use over agricultural lands. One commenter emphasized the importance of adequately managing pesticide spraying to protect human health from exposure. The commenter referenced a local case where sudden poor health suffered by residents appeared to be related to their exposure to pesticide sprays. Commenters reiterated that no pesticide management measures are being implemented over Oregon's agricultural lands, and the Oregon Department of Agriculture's pesticide use programs fail to control polluted runoff from pesticide use on agriculture lands.

One commenter noted that NOAA and EPA's rationale for agriculture does not make any findings about the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. They noted that Oregon's management measures for pesticides are not adequate to meet water quality standards or support designated uses and additional management measures to address pesticides are needed. Another commenter and member of an Agricultural Water Quality Management Area local advisory committee questioned how the committee was advised to not consider pesticides as a pollutant.

One group also described a herbicide monitoring program that found polluted runoff from all types of herbicide land application, including agriculture operations. They noted that while applicators may have applied the herbicide correctly, runoff was still occurring, indicating the state's rules were ineffective at protecting water quality from herbicide application.

On the contrary, another commenter pointed to the state's Pesticide Stewardship Program, CAFO and AQWMA programs are already in place to address any related pesticide issues.

Source: 28-D, 57-GG, 57-HH, 59-A, 81-B, 83-A, 83-E, 83-M

Response I.4:

Agriculture-- Extent of Nonpoint Source Pollution from Agriculture

<u>Comment:</u> Several commenters noted that NOAA and EPA did not support their claim that nonpoint source problems from agriculture are widespread. The stated that the draft salmon listings and recovery plan findings are based on opinion and anecdotal evidence and unsupported by scientific fact. Therefore, commenters requested that the agencies' references to the coho salmon listings and recovery plan findings as they relate to agriculture impacts to water quality be removed. They also noted that Oregon has already developed water quality standards designed to protect designated uses (including coho salmon and other endangered or threatened fish species) and this program adequately addresses activities to ensure protection of these species. They contended that most ambient water quality monitoring reports indicate "fair to excellent water quality" and sites with poor conditions are not due to agricultural activities.

Source: 64, 66, 68, 70-0, 71-M

Response I.4:

Agriculture- Need for Additional Management Measures

ED_454-000324794 EPA-6822_020300

Comment I.5: Multiple commenters noted that Oregon needed to implement additional management measures for Agriculture to meet water quality standards and to protect designated uses. Specifically, they noted that in most cases, allowable temperature increases for nonpoint source pollutants is zero, so it is very likely that agriculture activities are contributing to violations of temperature standards. In addition, none of the Agriculture Water Quality Management Plan Basin rules incorporate additional management measures needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.

Several commenters suggested specific additional management measures to protect water quality. Several commenters noted minimum riparian buffers needed to be established. One commenter noted that published literature suggested that the minimum width should be now less than 100 feet (30 meters) and that greater than 100 foot buffers may be needed in certain areas, such as low gradient meandering channels that are adjacent to designated critical habitat for listed species. Other additional management measures that commenters identified included fencing streams and riparian areas to reduce impacts by livestock, improved permitting, monitoring and relocation of CAFOs, and regulatory provisions to promote the establishment of riparian vegetation in critical habitat areas and to promote beaver reintroduction in suitable locations.

On the other hand, several commenters asserted that additional management measures for agriculture were not needed. The commenters noted that EPA and NOAA have not provided specific data or information that would support the need for additional management measures, many of which may be "economically achievable". They noted that CZARA does not have specific requirements for riparian buffers on agriculture land, restoration of lands to pre-agricultural uses, additional management measures that do not result in reduced nonpoint source pollution. In addition, they note that, per the CZARA statute, all management measures must be "economically achievable."

Source: 15-H, 23-B, 44-C, 47-B, 56-M, 57-CC, 57-EE, 60-E, 64-E, 66-E, 68-E, 71-H

Response I.5:

Agriculture-Addressing Legacy Agriculture Issues

Comment I.6: A few commenters expressed their concern about legacy agriculture issues, such as where riparian vegetation may have regrown on former agriculture land but the buffer is comprised of largely invasive species (i.e., blackberry brambles) and does not provide sufficient protection of stream water quality or create quality habitat. They believed that Oregon needed to adopt additional management measure requirements to address this legacy issue.

Another commenter, representing various groups, was troubled by NOAA and EPA's assertion in the proprosed findings, that AWQMA planning and enforcement do not address "legacy" issues created by agriculture activities that are no longer occurring. The commenter stated that neither CZARA nor the 6217(g) guidance define legacy issues or require that state coastal nonpoint programs address legacy issues. They noted that despite this, the Oregon Watershed Enhancement Board still invests money to address legacy agricultural issues. They added that Oregon does have a process in place to identify opportunities to enhance and restore watersheds, including "legacy" issues, "through the Oregon Plan for Salmon and Watersheds, the Oregon Aquatic Habitat Restoration and Enhancement Guide, OWEB riparian restoration projects, Area Plans, and many other federal, public and private partnerships. These programs are successful due to the voluntary efforts of many Oregon agriculture landowners".

Source: 44-F, 57, 71-T

Response 1.6

Agriculture-Effectiveness of Existing Monitoring and Tracking Programs

Comment: Several commenters expressed their concern with Oregon's existing monitoring and tracking efforts to evaluate the effectiveness of its agriculture programs and where improvements are needed. Although a few commenters acknowledged ODA's new strategy for more targeted water quality monitoring is a step forwarded, they believed a much more robust monitoring program was needed to understand when adaptive approaches are needed.

Another group acknowledged a significant gap in the existing science around the effectiveness of Oregon's agricultural practices in protecting water quality and designated uses. They noted that the state cannot move forward with stronger agriculture regulations without first having a good understanding of how its existing program programs are falling short and what improvements are needed to ensure water quality standards are being met.

Other commenters believed the state's existing monitoring and tracking efforts were effective at assessing implementation of agriculture practices. Specifically they noted that biennial reviews of the AWQMA plans, with about 18 reviews done each year, provide a way to track plan implementation. They also highlighted the state's efforts to develop a more formalized evaluation processes through the Strategic Implementation Areas and Focus Areas process to effectively target priority areas and issues. They also noted that the state's new Enterprise Monitoring Initiative, which began in 2012, monitors waterways passing through agriculture lands and can be used to inform the effectiveness of the AWQMA program.

Source: 71-S, 73-A, 79-I

Response 1.6

Hydromodification

Comment 1.8: A couple of commenters discussed the negative impacts of hydromodification, noting the effects of dams on water quality and habitat and impacts from channel modification. They declared that Oregon has failed to control polluted runoff from eroding stream banks and shorelines and it does not have programs in place to protect and restore channel conditions from modification.

Source: 46-H, 49-F

Response 1.8:

<u>Wetland</u>

Comment 1.9: One commenter noted that Oregon does not have programs in place to protect and restore riparian areas needed to maintain cool stream temperatures and habitat or to protect and restore wetlands.

Source: 49-F

Response 1.9:

H. Agriculture

General—Ability of Oregon's Agricultural Programs to Meet CZARA Requirements

Comment: Some commenters noted that they did not believe Oregon had satisfied the CZARA requirements for Agriculture and the conditions related to the agriculture management measures that NOAA and EPA placed on Oregon's Coastal Nonpoint Program. They believed Oregon has failed to control polluted runoff from agriculture activities and that water quality and designated use impairments were still occurring due to agricultural activities. Various points were made about the ineffectiveness of existing enforcement and monitoring efforts as well as the inadequate management approaches and programs the state relies on to meet the CZARA requirements (see specific comments below for detailed examples). Other commenters felt strongly that the state had satisfied the CZARA agriculture management measures and the conditions placed on its program related to agriculture (see specific comments below for detailed examples). They noted that finding otherwise would be unreasonable and would not be in line with CZARA requirements. Some commenters also noted finding that the state has not submitted an approvable program for agriculture would punish of the agriculture community.

Source: 44-F, 49-G, 64-C, 65-F, 66-C, 68-C

Response:

<u>General –Effectiveness of the Agriculture Water Quality Management Area Program and Plans for Meeting the CZARA Management Measures</u>

Comment: Several commenters expressed concerns with the effectiveness of the state's Agriculture Water Quality Management Area (AWQMA) Program for addressing polluted runoff. They did not believe the program enabled Oregon to meet CZARA requirements. However, other commenters were supportive of the program and thought it did enable the state to meet its CZARA agriculture requirements.

Specifically, commenters that were concerned about the adequacy of the AWQMA Program, noted that current agricultural water quality management area rules are insufficient to meet water quality standards and TMDL load allocations. They also stated that there is inadequate enforcement of the rules and lack of an implementation plan to ensure that agricultural landowners' voluntary actions occur. Oregon Department of Agriculture (ODA) largely relies on voluntary actions by landowners to adhere to the AWQMA rules and meet water quality standards. For example, one commenter, who is an agriculture landowner and a member of an Agricultural Water Quality Management Area (AWQMA) local advisory committee, discussed how the committee was informed that the AWQMA plan would be complaint driven and compliance was voluntary. The commenter questioned the effectiveness of this approach when ODA only issued three fines over the last eleven years.

Other commenters that felt Oregon had satisfied its CZARA agriculture management measure requirements and conditions through the AWQMA Program, noted that the coastal AWQMA plans directly reference the 6217(g) agriculture management measures and that ODA has the authority to require management measures that meet CZARA requirements or impose additional measures if

necessary. They also believed the AWQMA plans and rules had sufficient goals and policies for improving water quality within coastal watersheds.

These commenters also described how ODA works with ranchers and farmers to modify, reduce and remove ineffective agriculture practices. Commenters noted that farmers have worked hard to meet or exceed water quality standards by working with the state to develop Agricultural Water Quality Management Plans, which set watershed goals and investment priority areas that enhance water quality. They added that this planning also requires ODA to implement site-specific and site-appropriate controls, which are "designed to address actual water quality issues with economically achievable measures", which aligns with CZARA's requirements for economically achievable management measures. Several farmers noted that they willingly participated in the AWQMA and voluntary programs because they had the understanding that the AWQMA Program and there voluntary efforts would meet all federal and state regulatory requirements for agriculture.

Commenters noted the success of the state's AWQMA Program and voluntary efforts over the years. For example, one commenter noted between 1998-2012, OWEB contributed nearly \$18 millions for coastal agriculture projects and over an additional \$5M was provided in-kind support from SWCDs and landowners. These efforts were able to restore over 950 linear stream miles and improved agricultural practices that impacted over 2,750 acres of farmland. In addition, landowners voluntarily enrolled thousands of acres of farmland in federal programs designed to improve water quality.

Various groups represented by one comment letter contended that the Agricultural Water Quality Management Plans and rules meet and exceed the requirements of CZARA. They pointed out that agricultural land use represents approximately five percent of land uses within the coastal zone and the primary agricultural land use of that five percent is pasture or hay agriculture resulting in lesser impacts to water quality. They argued that most agriculture landowners comply with existing water quality management rules and meet relevant CZARA requirements and there is an existing process in place to address noncompliance instances. They also contended that CZARA requires the State and its agencies to use its authority to enforce a water quality program that meet or exceed 16 U.S.C. 1455b requirements and that ODA has demonstrated it has used its authority to enforce AWQMP rules where necessary and appropriate in the state's July 2013 submission.

Other commenters also asserted that the ODA has the ability to enforce the AWQMA program and ensure compliance with water quality requirements. They refute claims by others that few ODA enforcement actions over the years demonstrate that ODA does not have the ability and/or will to enforce the AWQMA program and ensure water quality is protected. On the contrary, the commenter notes that when a problem is identified, ODA first works closely with the noncompliant landowner to make necessary land use changes voluntarily before turning to enforcement. Therefore, most issues are corrected before an enforcement action is needed. Commenters highlighted the existing review and monitoring processes ODA has enacted to track program "implementation and effectiveness".

Source: 57-CC, 57-EE, 64-C, 64-F, 65-B, 65-C, 65-D, 65-E, 65-F, 66-C, 66-F, 68-C, 68-F, 71-A, 71-B, 71-C, 71-G, 71-K, 71-N, 71-Q, 72-A, 73-A, 78-H, 78-I

Response I.1:

<u>General—Inadequacy of Oregon Water Resources Department's (OWRD) Water Use Basin Program for Meeting Irrigation Management Measure</u>

Comment: Another group commented that the Oregon Water Resources Department's (OWRD's) Water Use Basin Program is inadequate for meeting CZARA requirements for agriculture. They suggested that NOAA and EPA were incorrect when finding that OWRD's Water Use Basin Program supports the irrigation measure and reiterated that Oregon's Basin Programs do not ensure that water quality and habitat for sensitive and endangered species will not be impaired. They urged EPA and NOAA to look closely at the deficiencies of the Basin Programs before attributing any water quality or fish habitat protection value to them as a measure in support of Oregon's agricultural conditions. They added that Oregon's rules provide no assurance that water use will be adequately limited to maintain minimum flows and Basin Programs fail in practice to protect minimum perennial streamflows and instream rights held by OWRD for the protection of aquatic wildlife and water quality. They concluded that EPA should disapprove Oregon's agricultural measures and acknowledged the lack of protection offered by Oregon's Water Use Basin Programs for preservation of aquatic life and designated uses in the agencies' final determination.

Source: 65-B, 65-C, 65-D, 65-E, 65-F

Comment [AC1]: Double check sources

Response I.2:

Agriculture-Buffers

Comment I.3: Various commenters noted the need for adequate buffers along both fish and non-fish bearing streams to protect water quality, including cold water temperatures needed for the recovery and health of native salmon. It was noted that Oregon lacks necessary management measures for riparian protection to help meet water quality standards and to protect coho salmon, amphibians, and drinking water. Another commenter noted too that Oregon has failed at controlling polluted runoff caused by erosion and sedimentation from agricultural lands and destruction of riparian areas by livestock. On the other hand, it was pointed out that farmers and ranchers have installed many miles of piping for livestock watering, and have planted and fenced many miles of stream banks.

One commenter spoke about her experience serving as an advisory member to the Mid-Coast Basin Agricultural Area Advisory Committee during its local area planning in 2009. The commenter explained that when specific buffer proposals were presented to the committee, "All of the specific proposals for riparian protection were rejected by the committee, despite their knowledge of specific water quality problems in the basin created or exacerbated by inadequate riparian vegetation, including stream temperature problems and bacterial contamination from livestock".

However, other commenters asserted that the AWQMA plans do require buffers. They noted that CZARA does not specifically require riparian buffers for agriculture. If NOAA and EPA do require a blanket riparian buffer for agriculture lands through the Coastal Nonpoint Program, it would be taking a "one-size-fits all" approach that goes against the inherent flexibility that CZARA provides the states.

Source: 15-H, 44-F, 49-G, 55-E, 71-R, 72-A, 81-A, 83-E, 83-F, 83-L

Comment [AC2]: Double check sources

Response I.3:

Agriculture-Pesticides

Comment I.4: Commenters expressed their concerns with the amounts of pesticides being applied and lack of management measures in place to address pesticide use over agricultural lands. One commenter emphasized the importance of adequately managing pesticide spraying to protect human health from exposure. The commenter referenced a local case where sudden poor health suffered by residents appeared to be related to their exposure to pesticide sprays. Commenters reiterated that no pesticide management measures are being implemented over Oregon's agricultural lands, and the Oregon Department of Agriculture's pesticide use programs fail to control polluted runoff from pesticide use on agriculture lands.

One commenter noted that NOAA and EPA's rationale for agriculture does not make any findings about the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. They noted that Oregon's management measures for pesticides are not adequate to meet water quality standards or support designated uses and additional management measures to address pesticides are needed. Another commenter and member of an Agricultural Water Quality Management Area local advisory committee questioned how the committee was advised to not consider pesticides as a pollutant.

One group also described a herbicide monitoring program that found polluted runoff from all types of herbicide land application, including agriculture operations. They noted that while applicators may have applied the herbicide correctly, runoff was still occurring, indicating the state's rules were ineffective at protecting water quality from herbicide application.

On the contrary, another commenter pointed to the state's Pesticide Stewardship Program, CAFO and AQWMA programs are already in place to address any related pesticide issues.

Source: 28-D, 57-GG, 57-HH, 59-A, 81-B, 83-A, 83-E, 83-M

Response I.4:

Agriculture-- Extent of Nonpoint Source Pollution from Agriculture

Comment: Several commenters noted that NOAA and EPA did not support their claim that nonpoint source problems from agriculture are widespread. The stated that the draft salmon listings and recovery plan findings are based on opinion and anecdotal evidence and unsupported by scientific fact. Therefore, commenters requested that the agencies' references to the coho salmon listings and recovery plan findings as they relate to agriculture impacts to water quality be removed. They also noted that Oregon has already developed water quality standards designed to protect designated uses (including coho salmon and other endangered or threatened fish species) and this program adequately addresses activities to ensure protection of these species. They contended that most ambient water quality monitoring reports indicate "fair to excellent water quality" and sites with poor conditions are not due to agricultural activities.

Source: 64, 66, 68, 70-0, 71-M

Response I.4:

<u>Agriculture- Need for Additional Management Measures</u>

Comment I.5: Multiple commenters noted that Oregon needed to implement additional management measures for Agriculture to meet water quality standards and to protect designated uses. Specifically, they noted that in most cases, allowable temperature increases for nonpoint source pollutants is zero, so it is very likely that agriculture activities are contributing to violations of temperature standards. In addition, none of the Agriculture Water Quality Management Plan Basin rules incorporate additional management measures needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds.

Several commenters suggested specific additional management measures to protect water quality. Several commenters noted minimum riparian buffers needed to be established. One commenter noted that published literature suggested that the minimum width should be now less than 100 feet (30 meters) and that greater than 100 foot buffers may be needed in certain areas, such as low gradient meandering channels that are adjacent to designated critical habitat for listed species. Other additional management measures that commenters identified included fencing streams and riparian areas to reduce impacts by livestock, improved permitting, monitoring and relocation of CAFOs, and regulatory provisions to promote the establishment of riparian vegetation in critical habitat areas and to promote beaver reintroduction in suitable locations.

On the other hand, several commenters asserted that additional management measures for agriculture were not needed. The commenters noted that EPA and NOAA have not provided specific data or information that would support the need for additional management measures, many of which may be "economically achievable". They noted that CZARA does not have specific requirements for riparian buffers on agriculture land, restoration of lands to pre-agricultural uses, additional management measures that do not result in reduced nonpoint source pollution. In addition, they note that, per the CZARA statute, all management measures must be "economically achievable."

Source: 15-H, 23-B, 44-C, 47-B, 56-M, 57-CC, 57-EE, 60-E, 64-E, 66-E, 68-E, 71-H

Response I.5:

Agriculture-Addressing Legacy Agriculture Issues

Comment I.6: A few commenters expressed their concern about legacy agriculture issues, such as where riparian vegetation may have regrown on former agriculture land but the buffer is comprised of largely invasive species (i.e., blackberry brambles) and does not provide sufficient protection of stream water quality or create quality habitat. They believed that Oregon needed to adopt additional management measure requirements to address this legacy issue.

Another commenter, representing various groups, was troubled by NOAA and EPA's assertion in the proprosed findings, that AWQMA planning and enforcement do not address "legacy" issues created by agriculture activities that are no longer occurring. The commenter stated that neither CZARA nor the 6217(g) guidance define legacy issues or require that state coastal nonpoint programs address legacy issues. They noted that despite this, the Oregon Watershed Enhancement Board still invests money to address legacy agricultural issues. They added that Oregon does have a process in place to identify opportunities to enhance and restore watersheds, including "legacy" issues, "through the Oregon Plan for Salmon and Watersheds, the Oregon Aquatic Habitat Restoration and Enhancement Guide, OWEB riparian restoration projects, Area Plans, and many other federal, public and private partnerships. These programs are successful due to the voluntary efforts of many Oregon agriculture landowners".

Source: 44-F, 57, 71-T

Response 1.6

Agriculture-Effectiveness of Existing Monitoring and Tracking Programs

Comment: Several commenters expressed their concern with Oregon's existing monitoring and tracking efforts to evaluate the effectiveness of its agriculture programs and where improvements are needed. Although a few commenters acknowledged ODA's new strategy for more targeted water quality monitoring is a step forwarded, they believed a much more robust monitoring program was needed to understand when adaptive approaches are needed.

Another group acknowledged a significant gap in the existing science around the effectiveness of Oregon's agricultural practices in protecting water quality and designated uses. They noted that the state cannot move forward with stronger agriculture regulations without first having a good understanding of how its existing program programs are falling short and what improvements are needed to ensure water quality standards are being met.

Other commenters believed the state's existing monitoring and tracking efforts were effective at assessing implementation of agriculture practices. Specifically they noted that biennial reviews of the AWQMA plans, with about 18 reviews done each year, provide a way to track plan implementation. They also highlighted the state's efforts to develop a more formalized evaluation processes through the Strategic Implementation Areas and Focus Areas process to effectively target priority areas and issues. They also noted that the state's new Enterprise Monitoring Initiative, which began in 2012, monitors waterways passing through agriculture lands and can be used to inform the effectiveness of the AWQMA program.

Source: 71-S, 73-A, 79-I

Response 1.6

Hydromodification

Comment 1.8: A couple of commenters discussed the negative impacts of hydromodification, noting the effects of dams on water quality and habitat and impacts from channel modification. They declared that Oregon has failed to control polluted runoff from eroding stream banks and shorelines and it does not have programs in place to protect and restore channel conditions from modification.

Source: 46-H, 49-F

Response 1.8:

Wetland

Comment 1.9: One commenter noted that Oregon does not have programs in place to protect and restore riparian areas needed to maintain cool stream temperatures and habitat or to protect and restore wetlands.

Source: 49-F

Response 1.9: